

In Search of GLOBE Data – Advanced Search Student Worksheet

Searching for GLOBE data can be monotonous and frustrating without the proper tools. The “In Search of GLOBE Data” series can be used as an introduction to searching and using GLOBE data. Project #1, parts 1 through 3, and Project #2 of “In Search of GLOBE Data – Student Worksheets,” offered step-by-step instructions on searching for schools by selecting Country, by entering a specific school name, and by entering values for data entered for the investigation under study. However, other methods of searching for GLOBE data exist. Try the following:

If continuing from Project #2, the scatter plot of GLOBE Data should be on your computer screen. Scroll down to the bottom of the page until you see a box containing the navigation bar contents. Click on [Maps and Graphs](#) listed under [GLOBE Data](#).

If you are beginning anew, and not continuing directly from Project #2, enter the GLOBE Home Page <www.globe.gov>, click on [Enter the GLOBE Site](#), and click on [Maps and Graphs](#) listed under [GLOBE Data](#) on the navigation bar on the left.

Click on [Search](#). You will see a box entitled “Advanced School Search.” Below the “SCHOOL LOCATION: Country Search” box, are five (5) gray buttons entitled, “State/Province Search” (this was introduced in Project #1, Part 2), “Lat/Lon Point Search,” “Lat/Lon Regional Search,” “Display Map of Selected Region,” and “Choose selected location(s) for Data Access.”

Latitude/Longitude Point Search

Click on [Lat/Lon Point Search](#). Notice that you still have the option to search by “School, City or Teacher Name.” Under “SCHOOL LOCATION: Point Search”, you will see “Find schools within” followed by a pull-down box. This lists the following possibilities: 1 km, 5 km, 10 km, 20 km, 50 km, 100 km, 500 km, and 1000 km. Following the pull down box you will notice: “Lat” (Latitude) and “Lon” (Longitude). Note: Positive values entered in the “Lat” box will search for schools north of the Equator, negative values will search for schools south of the Equator; positive values entered in the “Lon” box will search for schools east of the Prime Meridian, negative values will search for schools west of the Prime Meridian.

Try this example to familiarize yourself with the system: Enter 1000 km in the “Find schools within” box, 30 in the “Lat” box and 130 in the “Lon” box and click on [Go](#). This will bring up schools in China (CN), Japan (JP) and South Korea (KR). There are actually more than 100 schools within this range, so the Web site database will display only the first 50 schools. If you wish to see all of the schools within this area, click on “Follow this link to view all table entries.”

Click the “Back” button on your browser to return to the *Advanced Search* page. Change the “Lat” to –30 (keep the “Lon” at 130) and click on [Go](#). This will bring up schools in Australia (AU). A quick look at a World map will confirm that these regions are on opposite sides of the Equator. Similarly, entering 30 in the “Lat” box and –130 in the “Lon” box will

bring up California (US) while -30 in the “*Lat*” box and -130 in the “*Lon*” box will return you to the search page with the note: “Warnings and error messages: No schools were found using your search parameters. Please modify your values and try again.” A quick look at a World map will confirm that the latter location is in the South Pacific, Southeast of French Polynesia – just open ocean.

This type of search is useful when you want to start from a known point (for example, your school) and locate all schools within a certain distance (1 km, 5 km, 10 km, 20 km, 50 km, 100 km, 500 km, or 1000 km) from it.

Latitude/Longitude Regional Search

Scroll to the bottom of the page and find the box containing the navigation bar contents and click on [Maps and Graphs](#) listed under [GLOBE Data](#) then click on [Search](#). Note: The GLOBE Navigation Bar will always be accessible on the web page – sometimes it will be on the left side at the top of the page, other times it will be at the bottom of the page.

Click on [Lat/Lon Regional Search](#). This search tool looks similar to the Lat/Lon Point Search tool. However, rather than having the function of distance (1 km to 1000 km) there are four (4) boxes, “Northern Lat,” “Western Lon,” “Eastern Lon,” and “Southern Lat.” This will search within a geographic box defined by the user. Let’s look at an interesting example: enter 10 in “Northern Lat,” -10 in “Western Lon,” 10 in “Eastern Lon” and -10 in “Southern Lat” and click on [Go](#). This will bring up schools in Western Africa (for example: Benin (BJ), Cameroon (CM), Ghana (GH), and Nigeria (NG)). What you have just done is asked the database to look for GLOBE schools within a box 10° north of the Equator, 10° south of the Equator, 10° east of the prime meridian and 10° west of the prime meridian.

This search tool can be very useful for searching for schools in a specific region. However, if the area you’re searching is somewhat densely populated with GLOBE schools, your search may bring up hundreds of schools (for example, the search above brought up over 100 schools). You can narrow the search criteria by adding a tool you are already familiar with: Number of Data Reports (see “In Search of GLOBE Data – Student Worksheet, Project #1, Part 2: Creating graphs using GLOBE data” Step 7). Try the example search above (10 in “Northern Lat,” -10 in “Western Lon,” 10 in “Eastern Lon” and -10 in “Southern Lat”) but this time, under “Number of Data Reports,” enter 5000 in the “Find schools that have submitted at least data reports for Total” and click on [Go](#). The number of schools the computer will find will decrease to a more manageable number.

Choose an area on Earth that you would like to search for GLOBE schools. Refine the search by entering how many data schools should have (either “Total” data or select an investigation) to make your list. If you receive a message “No schools were found using your search parameters. Please modify your values and try again,” you should either change the geographic area of your search using a World map to make sure that you’re not selecting an area over the open ocean or over a country that has not yet joined GLOBE, or reduce the number of data in your search.

Display Map of Selected Region

Scroll to the bottom of the page and find the box containing the navigation bar contents and click on Maps and Graphs listed under GLOBE Data then click on Search. The “Display Map of Selected Region” tool will create a map of a selected geographic area (country or countries) based on the selections made in the “SCHOOL LOCATION: Country Search” box.

Try the following example: scroll down in the “SCHOOL LOCATION: Country Search” box until you see Hungary (HU). Click on Hungary and then click on “Display Map of Selected Region.” Change Map Size to Medium and click on Redraw map. A map will be generated showing Hungary and all Hungarian schools – as well as schools in neighboring countries that are within the area displayed on the map. Notice that the schools within the Hungarian border are triangular in shape while all others (outside of Hungary) are small squares. This will help you identify where Hungarian schools are located. Notice also that the default display is “How Many Data Are There?” If you wish to view actual student data, click on the pull down menu currently entitled “How Many Data Are There” and highlight “Measurements” under “STUDENT DATA” and click on Redraw map. Notice that the default date for the map is today.

Choose selected location(s) for Data Access

Scroll to the bottom of the page and find the box containing the navigation bar contents and click on Maps and Graphs listed under GLOBE Data then click on Search. The “Choose selected location(s) for Data Access” tool is useful for pulling the raw data out of the database of a selected geographic area (country or countries) based on the selections made in the “SCHOOL LOCATION: Country Search” box. These data can then be placed in a spreadsheet or GIS program. Try the following example: scroll down in the “SCHOOL LOCATION: Country Search” box until you see Saudi Arabia (SA). Highlight Saudi Arabia and click on “Choose selected location(s) for Data Access.” You can click on one round button (investigations: Atmosphere, Surface Water, etc.) choosing all protocols within that investigation or you can click on one or more square buttons within an investigation. Experiment by clicking the different round buttons and square buttons to become familiar with the selection process.

Click on “Air Temperature” under the “Atmosphere” investigation. Next scroll down below the table of investigations and protocols. You will see “Start date (YYYYMMDD)”; “End date (YYYYMMDD)”; and “Output format.” Defaults are: Start Date = the first date of measurement; End Date = the last date of measurement; Output format = “View results in browser.” Other options for Output format are: “Download tab-delimited results to disk,” “Download comma-delimited results to disk,” and “Download shapefile (zipped).” When you have selected the format you want, click on “Get the data now!” Follow the instructions of your spreadsheet or GIS program for displaying these data.

This is not meant to be an exhaustive collection of search tools available on the GLOBE Web site, but rather just enough to whet your appetite. GLOBE data await – enjoy!